

Fig. 2B

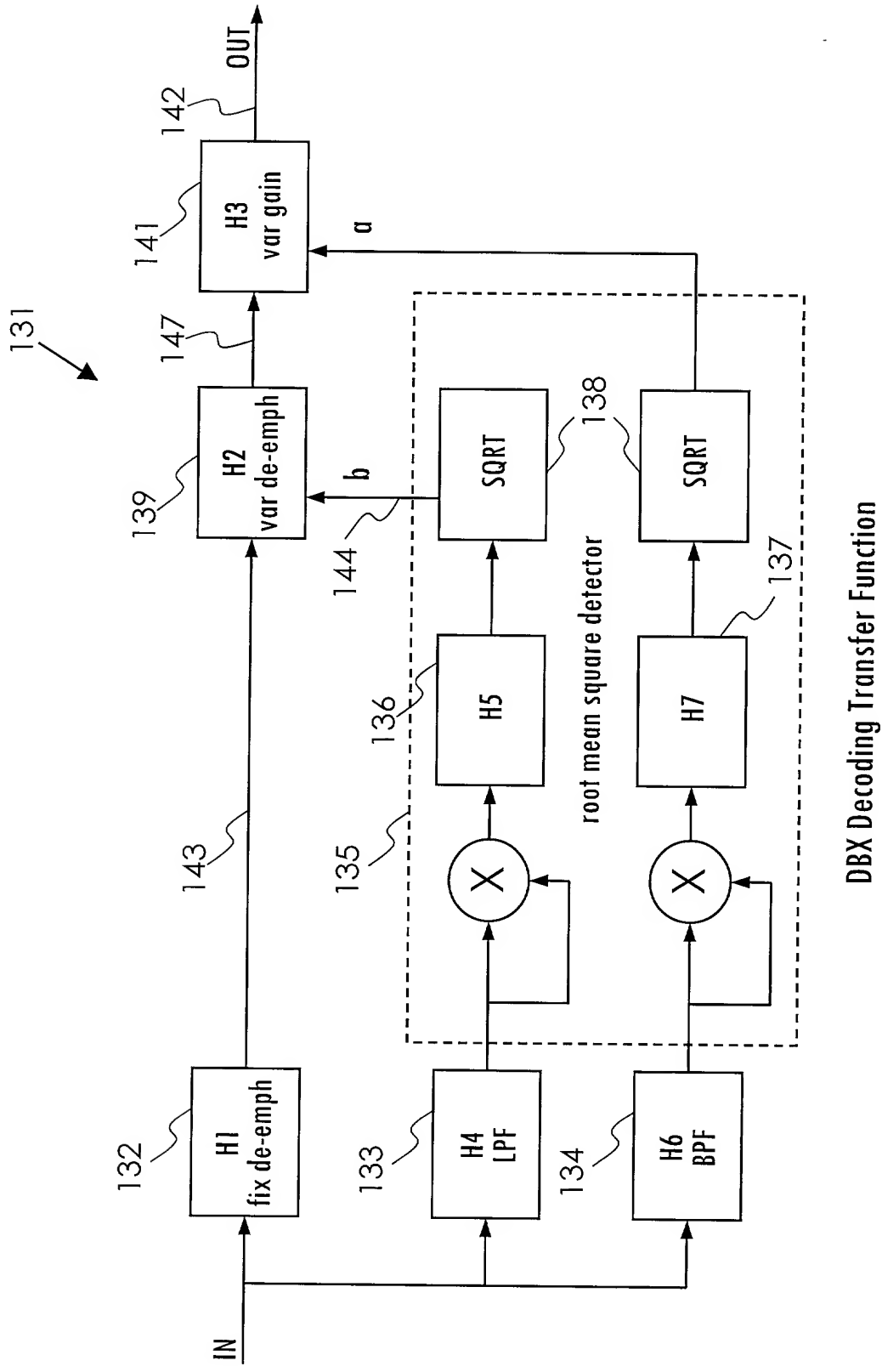


Fig: 3

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$$H1(s) = \frac{\frac{s}{5.23 \times 2\pi} + 1}{\frac{s}{0.408 \times 2\pi} + 1} \times \frac{\frac{s}{62.5 \times 2\pi} + 1}{\frac{s}{2.19 \times 2\pi} + 1}$$

$$H2(s) = \frac{1 + \left(\frac{s}{20.1 \times 2\pi}\right) \left(\frac{b+51b}{b+1}\right)}{1 + \left(\frac{s}{20.1 \times 2\pi}\right) \left(\frac{1+51}{b+1}\right)}$$

$$H3(s) = a$$

$$H4(s) = \frac{\left(\frac{s}{7.66 \times 2\pi}\right)^2}{\left[\left(\frac{s}{7.66 \times 2\pi}\right)^2 + \left(\frac{s}{7.31 \times 2\pi}\right) + 1\right]} \times \frac{1}{\left[\left(\frac{s}{26.9 \times 2\pi}\right) + 1\right]} \times \frac{\left(\frac{s}{3.92 \times 2\pi}\right)}{\left[\left(\frac{s}{3.92 \times 2\pi}\right) + 1\right]}$$

$$H5(s) = \frac{a2}{s + a2}$$

$$H6(s) = \frac{\left(\frac{s}{0.0354 \times 2\pi}\right)}{\left[\left(\frac{s}{0.0354 \times 2\pi}\right) + 1\right] \left[\left(\frac{s}{2.09 \times 2\pi}\right) + 1\right]}$$

$$H7(s) = \frac{a1}{s + a1}$$

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$$H1(z) = \frac{(0.0857 - 0.0696z^{-1})(0.0909 - 0.0076z^{-1})}{(1.0 - 0.9839z^{-1})(1.0 - 0.9167z^{-1})}$$

$$165A \quad H2(z) = \frac{(103*b+3) - z^{-1}(101*b+1)}{(3*b+3) - z^{-1}(b+101)}$$

$$H3(z) = a$$

$$H4(z) = \frac{0.5715 * 0.45085 * (1 - z^{-1})^3}{(1.0 - 2.0 * 0.5997 z^{-1} + 2.0 * 0.1470 z^{-2})(1.0 - 2.0 * 0.8242 z^{-1} + 2.0 * 0.3635 z^{-2})}$$

$$H5(z) = \frac{0.047^2}{1 - 0.99945 z^{-1}}$$

$$H6(z) = \frac{0.07959 (1 - z^{-2})}{1 - 2.0 * 0.9595 z^{-1} + 2.0 * 0.4595 z^{-2}}$$

$$H7(z) = \frac{0.02699^2}{1 - 0.9998 z^{-1}}$$

The square root calculation is done through the following equation

$$y[0] = 0.66667 * sq_in + 0.354167$$

$$sqrt = coef12 * (sq_in - y[0] * y[0]) + y[0]$$

The value of sq_in is between 1.0 to 0.25, and coef12 is one of 12 coefficients chosen based on sq_in.

Fig. 4

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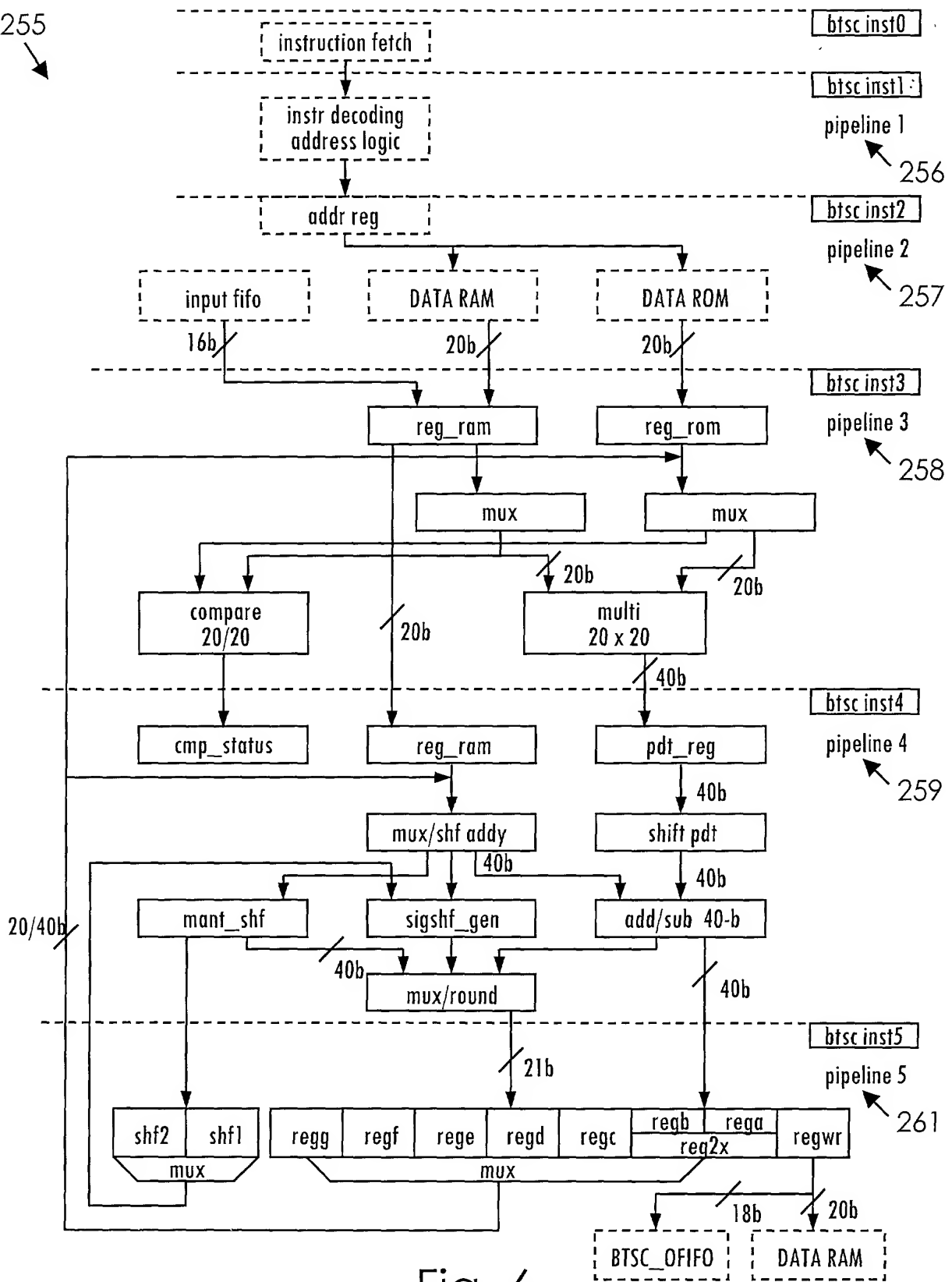


Fig. 6

